DOCUMENT RESUME

ED 175 896 TM 008 752

AUTHOR Pezzoli, Jean A.
TITLE The Strong Has Strong Biases.
INSTITUTION Hawaii Univ., Honolulu. Leeward Community Coll.
PUB DATE [79]
NOTE 7p.; Appendices marginally legible

EDRS PRICE MF-$0.83 HC-$1.67 Plus Postage.
DESCRIPTORS Blue Collar Occupations; *Females; *Interest Tests; Males; Norms; Occupational Tests; Professional Occupations; Scores; *Scoring; Sex Differences; Sex Discrimination; *Sex Stereotypes; *Test Bias; Test Interpretation; Test Reviews; Test Validity; Vocational Counseling; *Vocational Interests
IDENTIFIERS *Strong Campbell Interest Inventory; Strong Vocational Interest Blank

ABSTRACT

The revised and renamed Strong Campbell Interest Inventory (SCII) is examined to determine if the occupational and sex biases present in the older Strong Vocational Interest Blank (SVIB) were eliminated. It is concluded that an occupational bias (favoring professional rather than blue-collar occupations) still exists in the SCII, although there is a better representation of careers. Occupations are clustered around office occupations, education, and health occupations, while industrial production, transportation, social science, and agricultural occupations are underrepresented. Construction, and mechanical and repair jobs are not included. Separate male and female forms are merged into a single version in the SCII. However, certain occupations are designated as either male or female. Test scores can be deceiving if the counselor considers only the resulting graphs, rather than whether male, female, or both norms were used in graphing the results. Standard scores for all occupational scales are provided, although they are not plotted. It is concluded that these biases do not render the SCII useless; however, test users are advised to be aware of the drawbacks, and to use the SCII judiciously along with other interest and value inventories. A classification of the occupational clusters represented in male and female forms of the scales, as well as a sample one-page summary of results, are appended. (MH)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

"PERMISSION TO REPRODUCE THIS MATERIAL HAS BEEN GRANTED BY
Jean A. Pezzoli
Leeward CC.
TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)."

BEST COPY AVAILABLE

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
NATIONAL INSTITUTE OF EDUCATION
THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL NATIONAL INSTITUTE OF EDUCATION POSITION OR POLICY

ED175896

TM008 752

THE STRONG HAS STRONG BIASES

Review of the Strong Vocational Interest Blank and the Strong Campbell Interest Inventory

Jean A. Pezzoli
Office of Psychometry
Leeward Community College

Most counselors are now aware that the Strong Vocational Interest Blank has been revised, updated, renormed, and renamed: The Strong-Campbell Interest Inventory. The revised inventory is intended to circumvent some of the problems inherent in the older version. This may not be the case, as we may see by this report.

One of the more critical concerns about the original SVIB was the evidence of two inherent biases. There was an occupational bisas, such that respondents' interests were related to occupations predominately in the professions, to the exclusion of blue-collar fields. This rendered the instrument more useful to four-year institutions than to the two-year community college, which serves vocational education students who do not plan to transfer. The second bias in the SVIB was a sex bias, such that certain occupations, especially the supervisory and managerial occupations, predominated the male form; whereas, lesser-paying jobs were relegated to the female form. There was one further and more insidious sex bias on the interest part of the inventory. Test writers used different labels for the different forms. One found NUMBERS on the female form, but MATHEMATICS on the male form; similarly SPORTS was utilized on the female form, while on the male form was RECREATIONAL LEADERSHIP. One did not need to worry about who got what form, as the forms were color coded. The female form was pink, the men's, blue.

To assess whether the new Strong-Campbell Interest Inventory has been able to overcome the occupational and sex biases found in the older inventory, the occupations used by the SCII have been recategorized and are presented in the attached chart. The chart classifies the occupational scales of the SCII by career clusters of the Occupational Handbook.

While there appears to be a better representation of careers on the new form, one should be aware before using the SCII that an occupational bias is still in evidence. Note that there is a heavy concentration of occupations in three career clusters: Office Occupations (n=10), Education (n=11), and Health Occupations (n=16). Conversely, there are practically no occupations represented in numerous fields, namely Industrial Productions (n=1), Occupations in Transportation Activities (n=2), Social Scientists (n=2) and Agriculture Occupations (n=2). There are even two fields -- Construction Occupations and Mechanics and Repairmen -- where there are no occupations represented whatsoever. And yet the construction industry and service repair shops are two fields that heavily dominate the Hawaiian employment scene.

This evidence of an occupational bias in the SCII should not suggest that the instrument is rendered useless or invalid. It means only that is may not be valid for a particular situation. If, for example, during the initial contact interview it becomes evident that the counselee's interests are bent towards the

vocational fields, then other interest inventories besides the SCII may be more relevant. One should consider such instruments as the Self-Directed Search or the Ohio Vocational Interest Inventory which touch on the full spectrum of occupational fields. If on the other hand the counselee has narrowed down his interests to the professional field, particularly in medicine, business, or education, then the Strong-Campbell becomes a more powerful tool.

The point to remember is that the counselee cannot come out scoring high on REPAIRMAN if REPAIRMAN is not on the test. Since no test can measure everything, one must choose his tools wisely. Both a chisel and a saw are cutting instruments. But only one is appropriate for a particular situation. Frequently, the counselee is asked to take more than one inventory. In this way the counselor can look for contradictory and corroboratory information which often becomes the springboard for discussion and self-exploration on the part of the student.

The second type of bias made reference to earlier in this report was sex bias.

Before exploring this further, it should be pointed out that the SCII did not fall into the same trap that the earlier version did by having separate forms for each sex. There is only a single version of the SCII booklet for both men and women; and, as seen by the second attachment in this report, the score report handed back to the student looks the same for both men and women.

Looks can be deceiving. One very important point must be noted by the counselor when reviewing NCS score reports of the SCII. Certain occupations are designated female occupations and certain ones male (as seen by the small identifiers "m" and "f" next to the occupational titles). Hence, some titles such as ENGINEER and DENTIST (see upper right section of NCS score report) are repeated twice: first to compare the respondent's score against the female norm and secondly against the male norm. Other occupations, such as PHYSICAL SCIENTIST and BIOLOGIST are only listed once because the respondent's score is only compared to a male norm; or in the case of CHEMIST AND PHYSICIST, comparison is only made to a female norm. (Note why there needs to be separate norms in the first place is another legitimate concern that space limitations preclude discussing here.)

What is important to note here is this. Most counselors when they interpret a score report do not look first at the norms, but at the graph. The asterisks plotted on the graph will show how closely the respondent's interests resemble those of persons working in a particular field. Plots on the upper end of the graph indicate a close match in interest; plots on the lower end reflect mismatched interests.

Most counselors will initiate the test interpretation by searching the graph for those occupations or occupational clusters that are polarized, that is, where the asterisks are either in the "very similar" or "very Dissimilar" end of the scale. All else is generally passed over lightly.

The trouble with the SCII is that not all the occupations are plotted. Only the "female" occupations are plotted when the respondent is female while only the "male" occupations are plotted when the respondent is male. Hence, if the score report is for a female respondent, most counselors will overlook the "male" occupations since the male occupations are not plotted. Counselors will scan the score report looking for polarized scores, but the male occupations cannot be polarized

if they are not plotted in the first place. Conversely, if the respondent is a male, it will be the "female" occupations that are so easily overlooked.

Interpreters of NCS score reports who look only at the graphs will only get half the picture. Sin e only half the occupations are plotted on the graph, the interpreter will only eview those occupations associated with the sex of the counselee.

What to do about it. The standard scores for all occupational scales are provided; they are merely not plotted. In other words, the information is available. It is just not accessible.

A counselee who is interested in the complete picture should scan the two columns of the score report where the standard scores are given. In this way any high or low scores that are not already plotted may be done so.

Alternately, it is possible to program the computer to plot both male and female occupations by leaving blank the item on the answer sheet requesting the sex of the counselee. If "male" is shaded in on this item, the male occupations will be plotted; only female occupations will be plotted if "female" is shaded in; both male and female occupations will be plotted if the sex category is left blank.

Finally, alternative scoring houses such as Mincomp are available. Mincomp plots all occupations for both sexes. However, even in this regard the male occupations are plotted with a cross (x) and the female with a dash (-).

In summary, the new Strong-Campbell Interest Inventory is a noble attempt by the authors to counter the criticisms leveled against the Strong Vocational Interest Blank. Yet the occupational bias and sex bias found in the earlier version are still evident in the SCII. While these biases do not render the instrument useless, users of the test should be aware of its pitfalls and use it judiciously along with other interest and value inventories.

CLASSIFICATION OF OCCUPATIONAL SCALES OF THE
STRONG-CAMPBELL INTEREST INVENTORY BY
CAREER CLUSTER GROUPS OF THE OCCUPATIONAL HANDBOOK

OCCUPATIONAL HANDBOOK CAREER CLUSTER GROUPS	STRONG-CAMPBELL OCCUPATIONAL SCALES		
	ON BOTH FORMS	ON MALE FORM ONLY	ON FEMALE FORM ONLY
I. Industrial Production & Related Occupations			
A. Foundry Occupations			
B. Machine Occupations			
C. Printing Occupations			
D. Other Industrial Production & related occupations			Instrument Assembler
II. Office Occupations			
A. Clerical Occupations	Accountant		Secretary
B. Computer & Related Occupations	Computer Programmer		
C. Banking	Banker		
D. Insurance	Life Insurance Agent		
E. Administrative & Related Occupations	Advertising Executive Credit Manager Lawyer	Personnel Director Purchasing Agent	
III. Service Occupations			
A. Cleaning & Related Occupations			Executive Housekeeper
B. Food Service Occupation			
C. Personal Service Occupations		Funeral Director	Beautician
D. Private Household Service Occupations			
E. Protective & Related Services Occupations		Highway Patrol Officer Police Officer	
F. Other Service Occupations			
IV. Education & Related Occupations			
A. Teaching	Business Ed. Teacher College Professor Elementary Teacher English Teacher Math-Science Tchr. Social Science Tchr.	Language Teacher Vocational-Ag. Tchr.	Art Teacher Home Economics Tchr. Physical Tchr.
V. Sales Occupations		Computer Salesman Dept. Store Manager Realtor Sales Manager	Dept. Store Salesperson
VI. Construction Occupations			
VII. Occupations in Transportation Activities			
A. Air Transportation Occupation			Flight Attendant
B. Merchant Marine Occupations		Merchant Marine Officer	
C. Railroad Occupations			
D. Driving Occupations			

CONTINUED

CONTINUED

OCCUPATIONAL HANDBOOK CAREER CLUSTER GROUPS	STRONG-CAMPBELL OCCUPATIONAL SCALES		
	ON BOTH FORMS	ON MALE FORM ONLY	ON FEMALE FORM ONLY
VIII. Scientific & Technical Occupations		Forester	
A. Conservation Occupations	Engineer		
B. Engineers			
C. Environmental Scientists		Biologist	
D. Life Science Occupations	Mathematician		
E. Mathematics Occupations		Physical Scientist	Chemist
F. Physical Scientists			Physicist
Technician			
IX. Mechanics & Repairmen			
X. Health Occupations			Dental Assistant
A. Dental Occupations	Dentist		Dental Hygienist
B. Medical Practitioners	Optometrist	Chiropractor	
	Physician		
	Veterinarian		Radiological Technician
C. Med. Techn., Technologist & Assistant Occupation	Medical Technician		
D. Nursing Occupations	Nurse, Licensed Prac.		
	Nurse, Registered		Occupational Therapist
E. Therapy & Rehab. Occupations	Physical Therapist		
	Speech Pathologist		
F. Other Health Occupations	Dietitian		
	Pharmacist		
XI. Social Scientists		Cartographer	
		Social Scientist	
XII. Social Service Occupations			
A. Counseling Occupations	Guidance Counselor		Director, Christian Ed
B. Clergymen		Minister	
		Priest	
C. Other Social Service Occupations	Psychologist		
	Recreation Leader		
	Social Worker		
XIII. Art, Design, & Communications Related Occupations			Entertainer
A. Performing Artists	Musician		
B. Design Occupations	Artist	Architect	
	Interior Decorator	Photographer	
C. Communications Related Occup.	Reporter		Language Interpreter
XIV. Agriculture Occupations		Agribusiness Manager	
		Farmer	
XV. Government Occupations	Army Officer	Air Force Officer	
		Navy Officer	
NOT CLASSIFIED	Buyer	Chamber of Commerce Exec.	YWCA Staff
		School Superintendent	
		Skilled Crafts	

RESULTS
THIS IS A MODERATELY LOW SCORE.
THIS IS AN AVERAGE SCORE.
THIS IS A LOW SCORE.
THIS IS A LOW SCORE.
THIS IS A MODERATELY LOW SCORE.
THIS IS AN AVERAGE SCORE.

AVERAGE	HIGH	VERY HIGH

BEST COPY AVAILABLE

OCCUPATIONAL SCALES

SCORING SYSTEMS

NORM	SCALE	CODE
26	f ENGINEER	RI
36	m ENGINEER	RI
17	f CHEMIST	RI
27	m PHYSICAL SCIENTIST	RI
48	f MEDICAL TECH.	RI
63	f PHARMACIST	RI
37	f DENTIST	RS
48	m DENTIST	RS
56	f DENTAL HYGIENIST	RS
61	f PHYS. THERAPIST	RSE
52	m PHYSICIAN	RIS
35	MATH-SCI. TEACHER	[illegible]
41	f MATH-SCI. TEACHER	[illegible]
35	f DIETITIAN	[illegible]
40	f MEDICAL TECH.	[illegible]
48	f OPTOMETRIST	[illegible]
17	f COMPUTER PROGR.	[illegible]
29	m COMPUTER PROGR.	[illegible]
21	f MATHEMATICIAN	[illegible]
21	m MATHEMATICIAN	[illegible]
10	m PHYSICIST	[illegible]
43	m BIOLOGIST	[illegible]
40	m VETERINARIAN	[illegible]
46	m OPTOMETRIST	[illegible]
44	m PHYSICIAN	[illegible]
33	m SOCIAL SCIENTIST	[illegible]
33	m COLLEGE PROF.	[illegible]
40	f COLLEGE PROF.	[illegible]
18	f SPEECH PATHOL.	[illegible]
20	m SPEECH PATHOL.	[illegible]
9	m PSYCHOLOGIST	[illegible]
23	f PSYCHOLOGIST	[illegible]
19	f LANG. INTERPR.	[illegible]
6	m ARCHITECT	[illegible]
26	m ADVERTISING EXEC.	[illegible]
29	m ARTIST	[illegible]
32	f ARTIST	[illegible]
-16	f ART TEACHER	[illegible]
32	m PHOTOGRAPHER	[illegible]
27	m MUSICIAN	[illegible]
32	f MUSICIAN	[illegible]
31	m ENTERTAINER	[illegible]
-12	f INT. DECORATOR	[illegible]
30	m INT. DECORATOR	[illegible]
22	m ADVERT. EXEC.	[illegible]
12	f LANGUAGE TEACH.	[illegible]
16	f LIBRARIAN	[illegible]
24	m LIBRARIAN	[illegible]
17	f REPORTER	[illegible]
35	m REPORTER	[illegible]
13	f ENGLISH TEACHER	[illegible]
20	m ENGLISH TEACHER	[illegible]
52	f NURSE, REGIST.	[illegible]
34	f PHYS. THERAPIST	[illegible]
51	f NURSE, L. P.	[illegible]
16	f SOCIAL WORKER	[illegible]
15	m SOCIAL WORKER	[illegible]
38	m PRIEST	[illegible]
11	f DIR., CHRISTIAN ED.	[illegible]
16	f YWCA STAFF	[illegible]
32	m MINISTER	[illegible]
27	f ELEM. TEACHER	[illegible]